



DESCRIPTIVE	NOTES
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EVALUATION OF PROSPECTIVE WELL SITES

The maps should be used in the suggested sequence in order to obtain the most economic yields. Map 3126-1 indicates yields from the shallowest formations and should be consulted first. Progressively deeper and more costly wells will have to be drilled to obtain the yields from the formations in order to obtain the yields indicated on maps 3126-3 and 3126-5.

Evaluation Procedure

1. locate the well site on Map 3126-1 of Sheet 1 (Yields from Shallow Overburden);
2. note the colour of the map at the well site;
3. refer to the legend and relate the colour to the appropriate probable yield;
4. if the probable yield does not meet your water requirements, repeat steps one through three using Map 3126-3 on Sheet 2 (Yields from Deep Overburden). Similarly, if probable yields determined from Map 3126-3 are insufficient, repeat the same steps using Map 3126-5 on Sheet 3 (Yields from Bedrock).

To evaluate the depths to water-bearing zones

5. If Map 3126-1 was selected in the above steps, water-bearing zones occur at depths easily reached by shallow dug and bored wells and sand points; if Map 3126-3 was selected, locate the well site on Map 3126-4 and note the depth to the water-bearing zones by using the legend; if Map 3126-5 was selected, locate the well site on Map 3126-6 and note the depths to the water-bearing zones by using the legend;
6. exact depths to water-bearing zones for individual wells are shown on maps 3126-1, 3126-3 and 3126-5.

To evaluate water quality:

7. to evaluate the likely ground-water quality at a potential well site, locate the well on the selected yield map and note the nearby ground-water sampling points. Chemical analyses of these samples are found in the Inorganic Chemical Analyses (tables 1, 2, and 3) on Sheet 4. To interpret the significance of the analyses, refer to the "Water Quality" section on Sheet 4.

A COMPARISON OF DIFFERENT WELL TYPES AND THEIR APPLICATIONS

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YIELDS FROM BEDROCK – SUMMARY

Most wells in bedrock yield less than 2 or between 2 and 10 gallons per minute. These wells penetrate limestones and shales of the Gull River and Shadow Lake formations or, in the northeast portion of the map area, the Cambrian-age gneisses and schists of the Central and Eastern Belknap Mountains. Wells yielding 10 to 50 and more than 50 gallons per minute are found along the shores of lakes Simcoe and Couchiching and Sturgeon and Georgian Bays in the western and central portions of the map area. These wells obtain their yielding waters produce water from fractured bedrock and pumping induces infiltration from the adjacent bodies of water. One area of wells yielding 10 to 50 gallons per minute is located in the northeast corner of the map area. These wells obtain water from fractured bedrock and pumping induces infiltration from the adjacent bodies of water. Wells in this area probably are completed in highly-fractured bedrock.

Wells in the map area to the west, and in Matchedash Township in the north-central portion of the map area, have too few wells for interpretation of probable yields to bedrock wells. In these areas probable yields of individual wells are not known. In these areas, however, if the water is not adequate water supplies likely can be obtained from the overburden.

NOTE:
Bedrock-surface elevations derived from water-well records on file with the Ontario Ministry of Environment up to September, 1979.
Bedrock topography compilation and interpretation by M. E. Turner, 1980.
Cartography by D. McQuillan.
Base maps derived from 1:50 000 map sheets of the National Topographic series.

SOURCES OF INFORMATION

Burwasser, G. J., and Ford, M. J., 1974; Bedrock topography of the Orr Lake area, southern Ontario; Ontario Division of Mines, Preliminary Map P.9; Bedrock Topography Series.

Deane, R. E., 1974; Bedrock topography of the Barrie area, southern Ontario; Ontario Division of Mines, Preliminary Map P/9, Bedrock Topography Series.

Deane, R. E., 1950; Pleistocene geology of the Lake Simcoe District, Ontario; Geological Survey of Canada, Memoir 256.

Liberty, B. A., 1989; Palaeogeographic geology of the Lake Simcoe area, Ontario; Ontario Division of Mines, Report 100, 100 pp.

Turner, M. E., 1981; Ground-water probability of the southern portion of the County of Simcoe; Ontario Ministry of Environment, Water Resources Branch, Map 2195.

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MINISTRY OF THE ENVIRONMENT
Water Resources Branch

COUNTY OF SIMCOE
(Northern Portion)

Map 3126

GROUND-WATER PROBABILITY

WATER SUPPLIES IN BEDROCK